

Immersion Lens With Magnetic Shield For Charged Particle Beam System

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ABSTRACT

An immersion lens for a charged particle beam lithography system includes a magnetically floating shield that limits a deflection magnetic field from creating eddy currents in electrically conductive components of the system downstream from the shield. The surface of the shield lies parallel or approximately parallel to a magnetic equipotential surface of the focusing magnetic field so that the shield does not affect the focusing magnetic field. The shield is, e.g., a ferrite disk or a hollow ferrite cone defining a central bore for passage of the charged particle beam.

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